

STEREO POWER AMPLIFIER/GRAPHIC EQUALIZER

# B-B5/B7

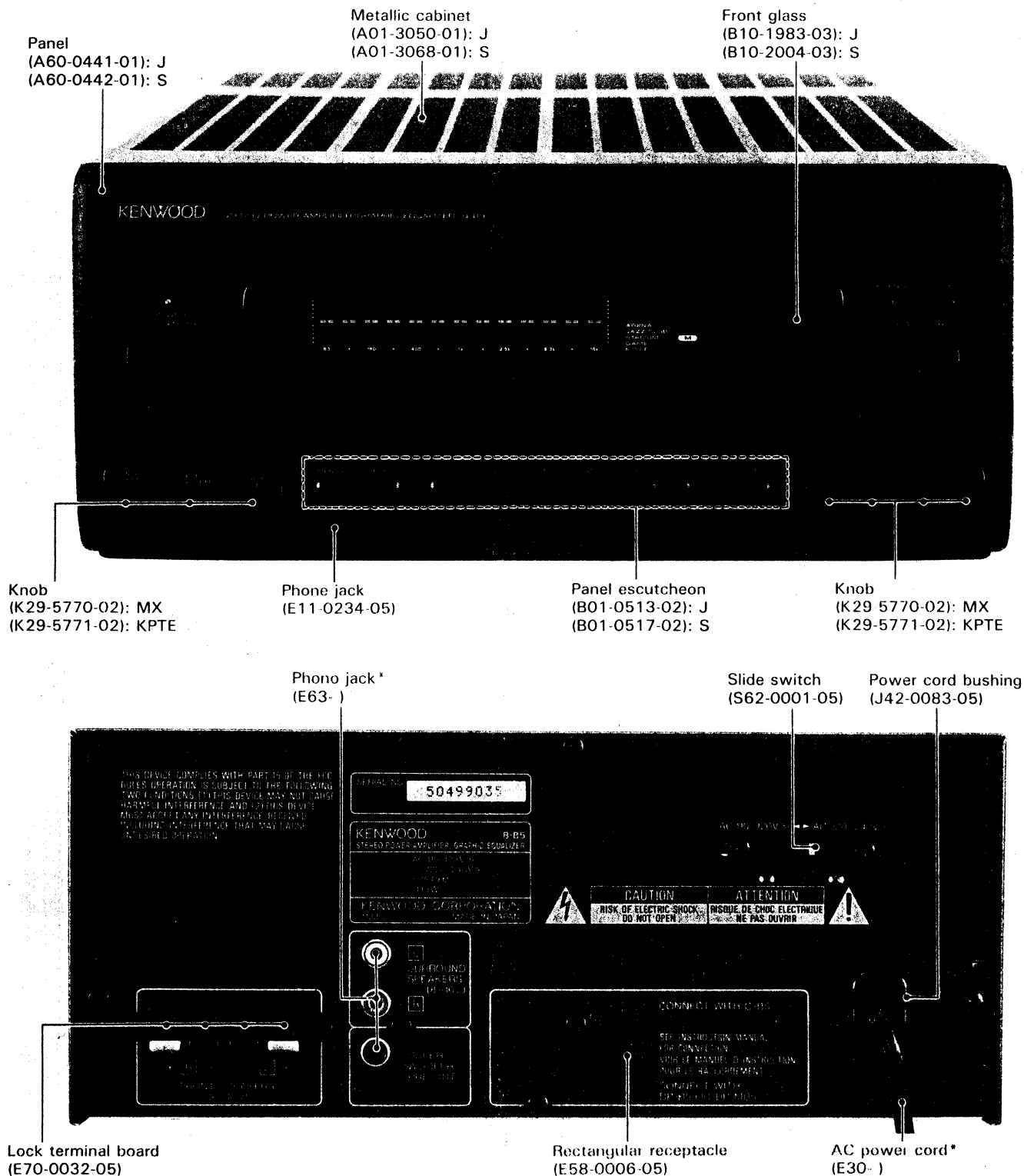
## SERVICE MANUAL

(UD-501/701M)

# KENWOOD

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B51-4751-00(S) 4447

B-B5

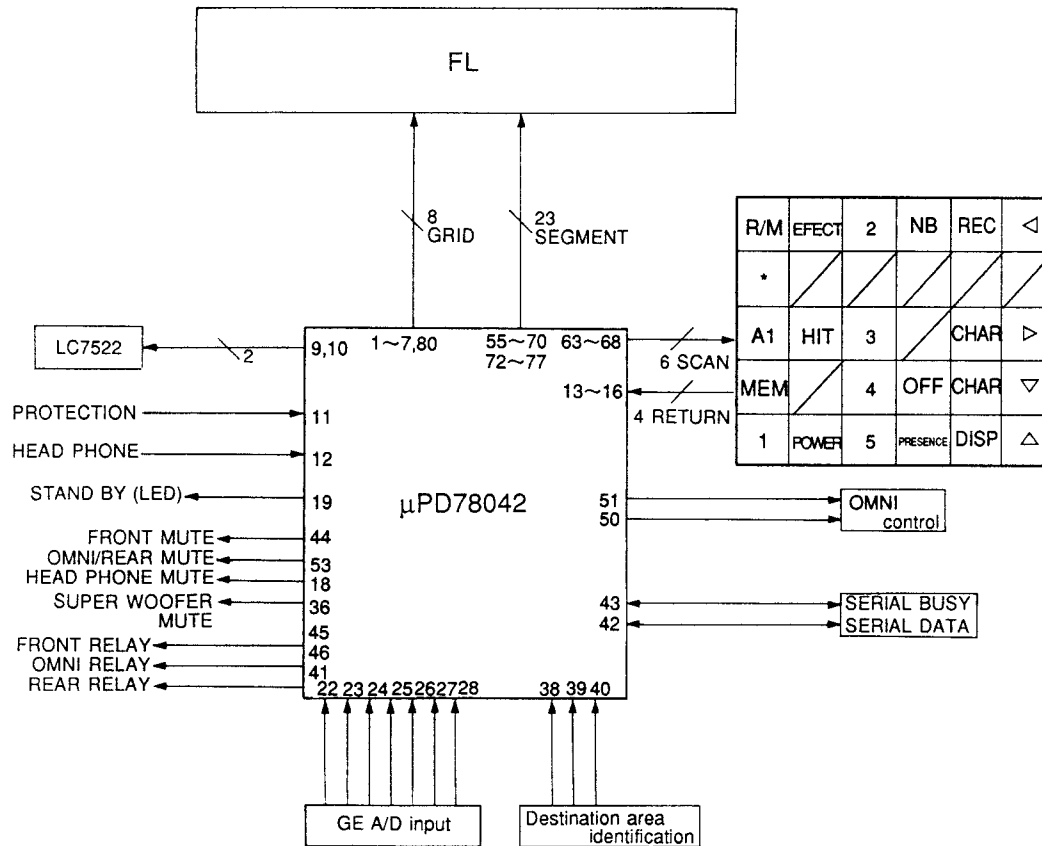


\*Refer to parts list on page 16.



## CIRCUIT DESCRIPTION

## PORT LAYOUT

Microprocessor  $\mu$  PD78042GF-038(IC11-X09)

## CIRCUIT DESCRIPTION

## Pin Description

Pin No.	Pin Name	I/O	Name	Description
1	P94	O	GRID 6	FL driver output Grid 6
2	P93	O	GRID 5	FL driver output Grid 5
3	P92	O	GRID 4	FL driver output Grid 4
4	P91	O	GRID 3	FL driver output Grid 3
5	P90	O	GRID 2	FL driver output Grid 2
6	P81	O	GRID 1	FL driver output Grid 1
7	P80	O	GRID 0	FL driver output Grid 0
8	Vdd			+5V
9	P27	O	GE. IC (CLOCK)	Gleico IC (LC7522) $\rightarrow$ CLK (Clock terminal)
10	P26	O	GE. IC (DATA)	Gleico IC (LC7522) $\rightarrow$ DI (Data terminal)
11	P25 SI0/SB0	I	PROTECTION	Protection detection Low: NON PROTECTION, High: PROTECTION
12	P24 BUSY	I	HEAD PHONE	Headphone input detection Low: NON HEADPHONE High: HEADPHONE IN
13	P23 STB	O	KEY RETURN 3	Key return 3
14	P22 SCK1	O	KEY RETURN 2	Key return 2
15	P21 SO1	O	KEY RETURN 1	Key return 1
16	P20 SI1	O (I)	KEY RETURN 0	Key return 0
17	RESET		RESET	Microcomputer set terminal
18	P74	O	HEAD PHONE MUTE	Headphone mute Low: MUTE OFF High: MUTE ON
19	P73	O	STAND BY LED	Standby LED
20	AVss			GND terminal
21	P17 AN17	I	NC	Unused
22	P16 AN16	I	AD (16kHz)	Analog input 16kHz
23	PP15 AN15	I	AD (6.3kHz)	Analog input 6.3kHz
24	P14 AN14	I	AD (2.5kHz)	Analog input 2.5kHz
25	P13 AN13	I	AD (1kHz)	Analog input 1kHz
26	P12 AN12	I	AD (400Hz)	Analog input 400Hz
27	P11 AN11	I	AD (160Hz)	Analog input 160Hz
28	P10 AN10	I	AD (63Hz)	Analog input 63Hz
29	AVdd			+5V
30	AVref			+5V
31	P04 XT1	I	Vss	GND
32	XT2			
33	Vss			GND
34	X1	I		Oscillator 4.19MHz
35	X2			Oscillator 4.19MHz
36	P37	O	SW MUTE	Super woofer mute Low: S.W. OFF High: S.W. ON
37	P36 BUZ	O	POWER RELAY	Power relay Low: POWER OFF High: POWER ON
38	P35 PCL	I	UD701/UD501	UD701/UD501 destination area changeover Low: UDA501 High: UD701
39	P34 TI2	I	HIT MASTER	HIT MASTER destination area changeover Low: HIT MASTER OFF High: HIT MASTER ON
40	P33 TI1	I	OMNI I	OMNI destination area changeover Low: OMNI OFF, High: OMNI ON

# B-B5/B7

## CIRCUIT DESCRIPTION

Pin No.	Pin Name	I/O	Name	Description
41	P32 TO2	O	REAR RELAY	Rear speaker relay Low: RELAY OFF, High: RELAY ON
42	P31 TO1	I O	SDATA	Serial data terminal
43	P30 TO0	I O	SBUSY	Serial busy terminal
44	P03 INTP3/CIO	I	FRONT MUTE	Front mute Low: MUTE ON High: MUTE OFF
45	P02 INTP2	I	FRONT RELAY	Front speaker raly Low: RELAY OFF High: RELAY ON
46	P01 INTP1	I	OMNI RELAY	Omni speaker relay Low: RELAY OFF High: RELAY ON
47	P00 INTP0/TIO	I	CE	Backup terminal
48	IC (Vpp)			GND
49	P72	I	Vss	GND
50	P71	O	OMNI B	Omni TC terminal → B
51	P70	O	OMNI A	Omni TC terminal → A
52	Vdd			+ 5V
53	P127 FIP33	O	OMNI MUTE	Omni mute Low: MUTE OFF High: MUTE ON
54	P126 FIP32	O	SEGMENT 22	FL drive output segment 22
55	P125 FIP31	O	SEGMENT 21	FL drive output segment 21
56	P124 FIP30	O	SEGMENT 20	FL drive output segment 20
57	P123 FIP29	O	SEGMENT 19	FL drive output segment 19
58	P122 FIP28	O	SEGMENT 18	FL drive output segment 18
59	P121 FIP27	O	SEGMENT 17	FL drive output segment 17
60	P120 FIP26	O	SEGMENT 16	FL drive output segment 16
61	P117 FIP25	O	SEGMENT 15	FL drive output segment 15
62	P116 FIP24	O	SEGMENT 14	FL drive output segment 14
63	P115 FIP23	O	SEGMENT 13	FL drive output segment 13
64	P114 FIP22	O	SEGMENT 12	FL drive output segment 12
65	P113 FIP21	O	SEGMENT 11	FL drive output segment 11
66	P112 FIP20	O	SEGMENT 10	FL drive output segment 10
67	P111 FIP19	O	SEGMENT 9	FL drive output segment 9
68	P110 FIP18	O	SEGMENT 8	FL drive output segment 8
69	P107 FIP17	O	SEGMENT 7	FL drive output segment 7
70	P106 FIP16	O	SEGMENT 6	FL drive output segment 6
71	Vload			- 30V
72	P105 FIP15	O	SEGMENT 5	FL drive output segment 5
73	P104 FIP14	O	SEGMENT 4	FL drive output segment 4
74	P103 FIP13	O	SEGMENT 3	FL drive output segment 3
75	P102 FIP12	O	SEGMENT 2	FL drive output segment 2
76	P101 FIP11	O	SEGMENT 1	FL drive output segment 1
77	P100 FIP10	O	SEGMENT 0	FL drive output segment 0
78	P97 FIP9	O	NC	Unused
79	P96 FIP8	O	NC	Unused (A logic terminal)
80	P95 FIP7	O	GRID 7	FL driver output grid 7 (B logic terminal)

# B-B5/B7

## CIRCUIT DESCRIPTION

### 1. Test mode by means of main unit keys

#### (1) Setting method

- Plug the power cord in the AC electrical outlet while pressing the FLAT key.

#### (2) Cancellation method

- The test mode set at the beginning is cancelled when the power cord is unplugged from the AC electrical outlet.

#### (3) Contents

##### ① Automatic POWER ON

- The POWER turns necessarily ON, and all functions are initialized when the power cord is plugged into the AC electrical outlet while pressing the FLAT KEY.

##### ② ALL LIT mode

- All FI and all LED light up without fail when the power cord is plugged into the AC electrical outlet while pressing the FLAT KEY. After that, the equipment switches to the ordinary indication mode when any key of the main unit is operated.

##### ③ Check of the circuit operation by means of the main unit keys

##### a. Relay operation check test

The FRONT, OMNI → FRONT, S switching operation takes place every time the MEMORY key is pressed, and the "OMNI 123" ↔ "PRESENCE all lit up" appears accordingly on the display during 5 seconds.

##### b. Test of the super woofer

The super woofer is turned ON/OFF cyclically every time the REF/MANU key is pressed, and the "SUPER WOOFER" segment of the FL turns ON/OFF accordingly.

##### c. Operations of the other main unit keys in the test mode

The operations of the test mode and the workings of the list of workings are carried out.

### Operations and workings of the graphic equalizer in test mode

Name of the key	Workings
EQ DISPLAY	• Changeover of the FL display mode The EQ diaply, inverted spectrum analyzer display, and the display of the Niagara mode (the short circuit of the GRID and the short circuit of the SEGMENT can be checked) are switched cyclically.
1	• EQ all frequency center The booth cut extents of all bands used are set at the center.
2	• EQ all frequency MAX The booth cut extents all bands used are set at MAX.
3	• EQ all frequency MIN The booth cut extents of all band sused are set at MIN.

### 2. Initialization

#### (1) Setting method

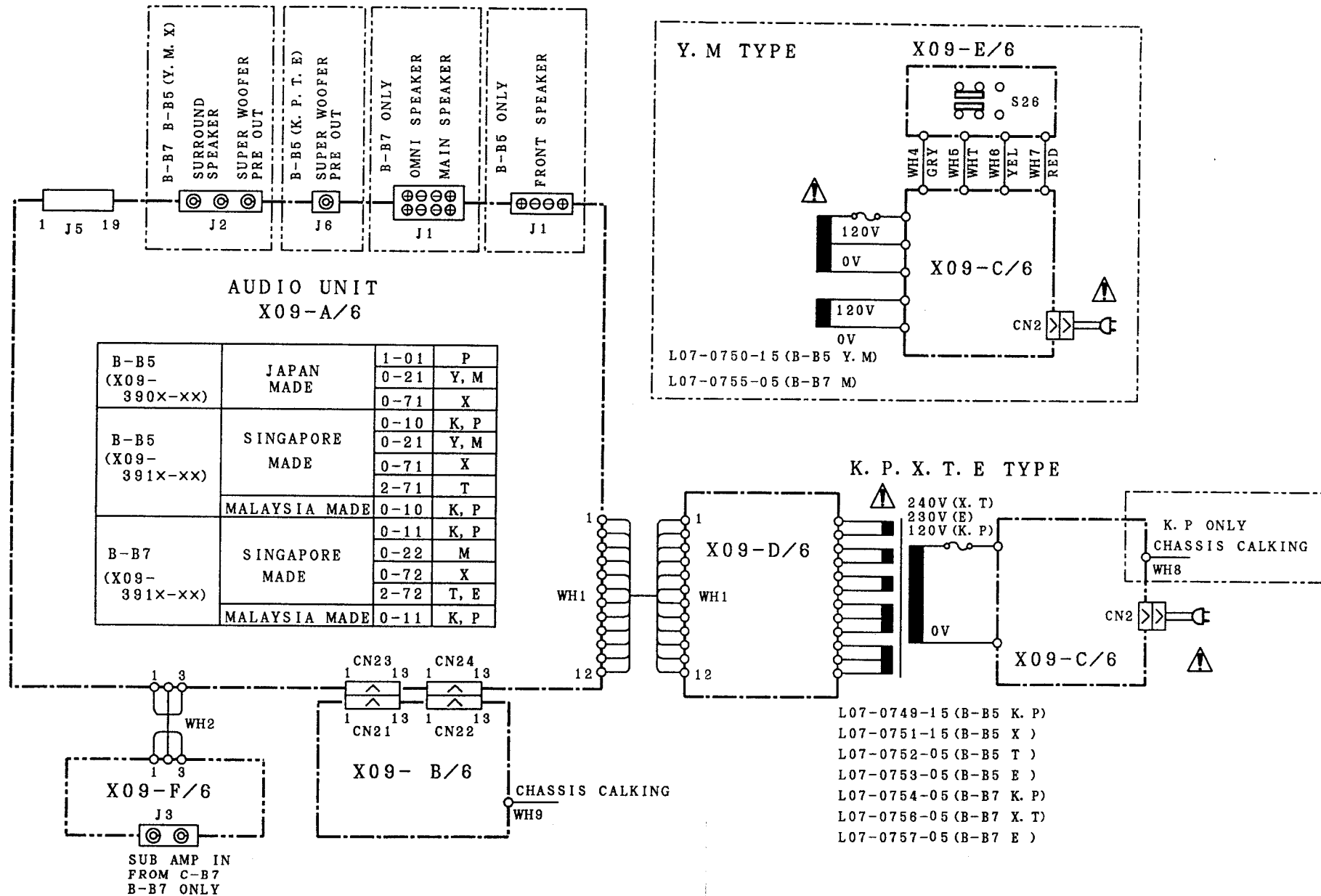
- The equipment is initialized by plugging the power cord in the AC electrical outlet while pressing the EQ MEMORY key.
- The equipment is initialized when the power cord is unplugged and then plugged in the AC electrical outlet during the test mode by means of the main unit keys and the test mode by means of serial communication.

#### (2) Contents

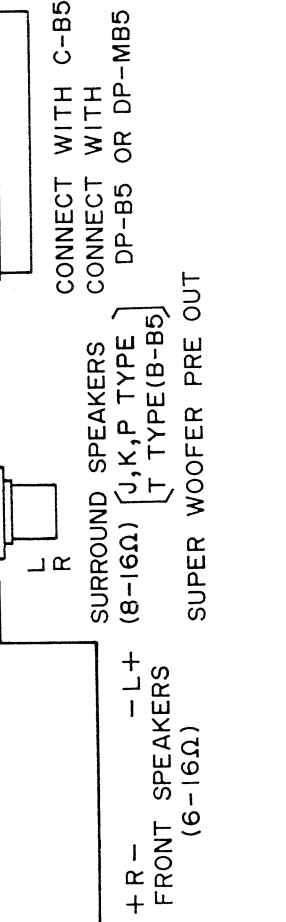
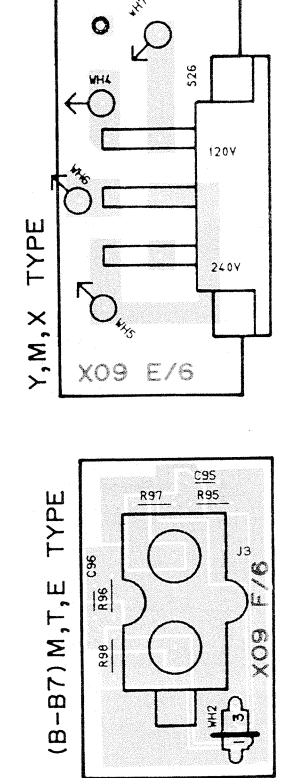
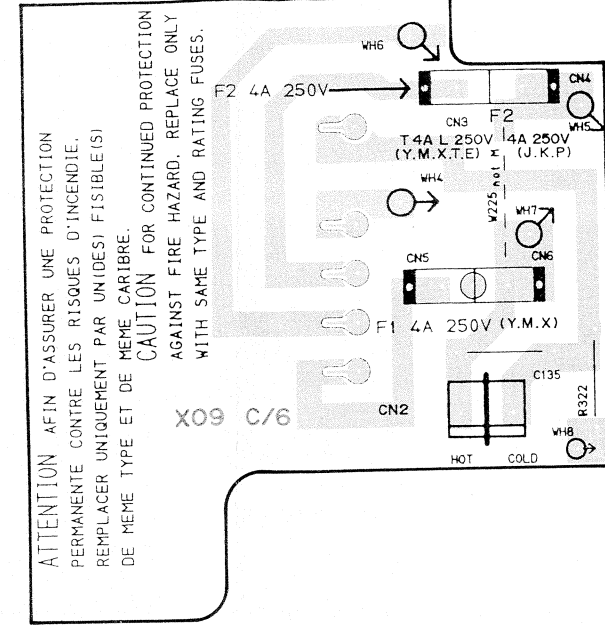
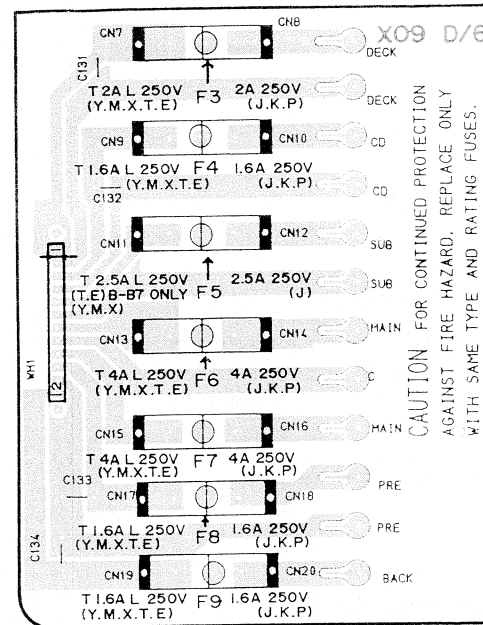
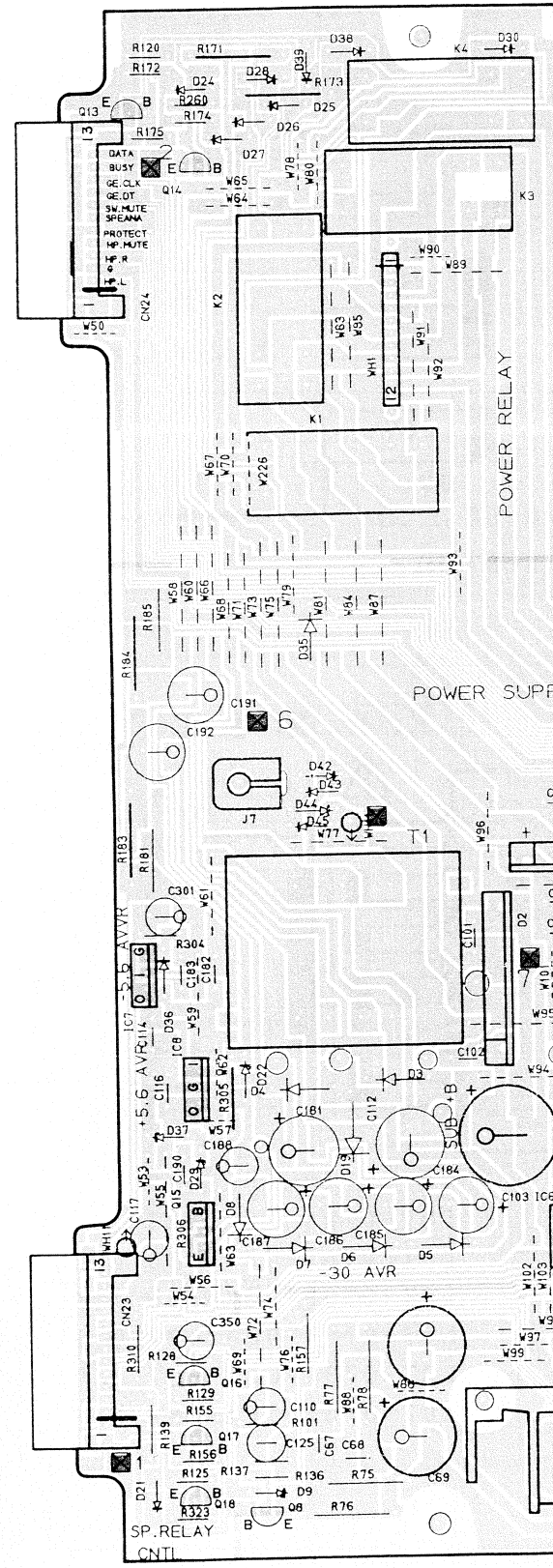
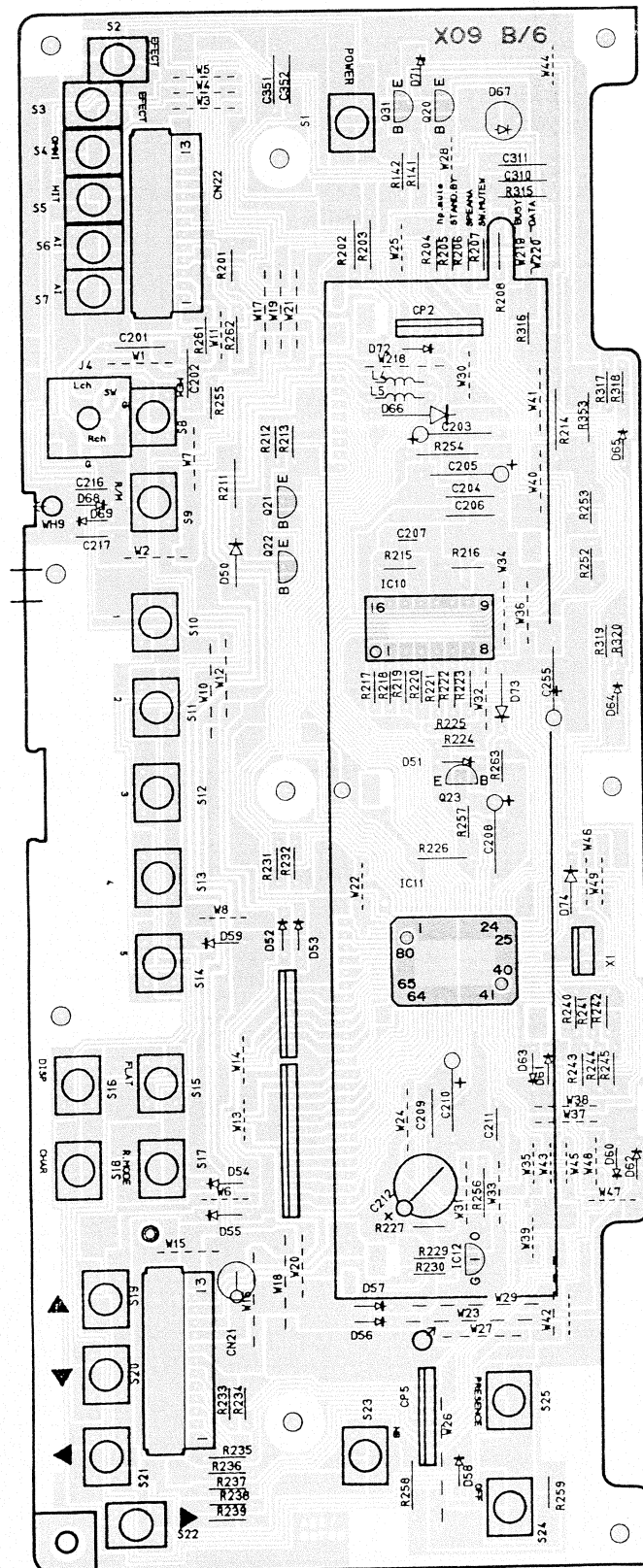
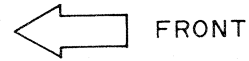
All functions are initialized (Including test mode).

# B-B5/B7 B-B5/B7

## WIRING DIAGRAM

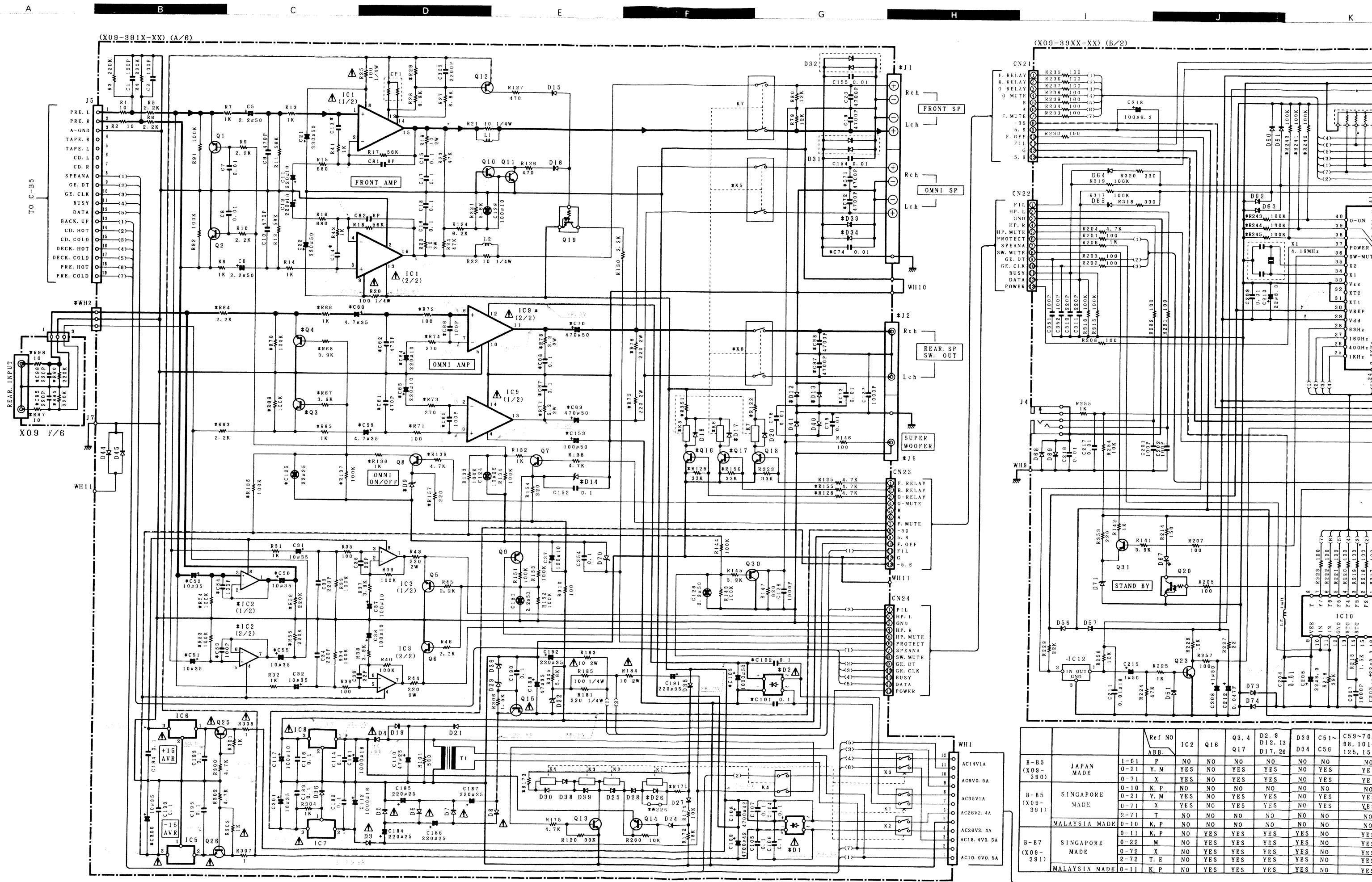


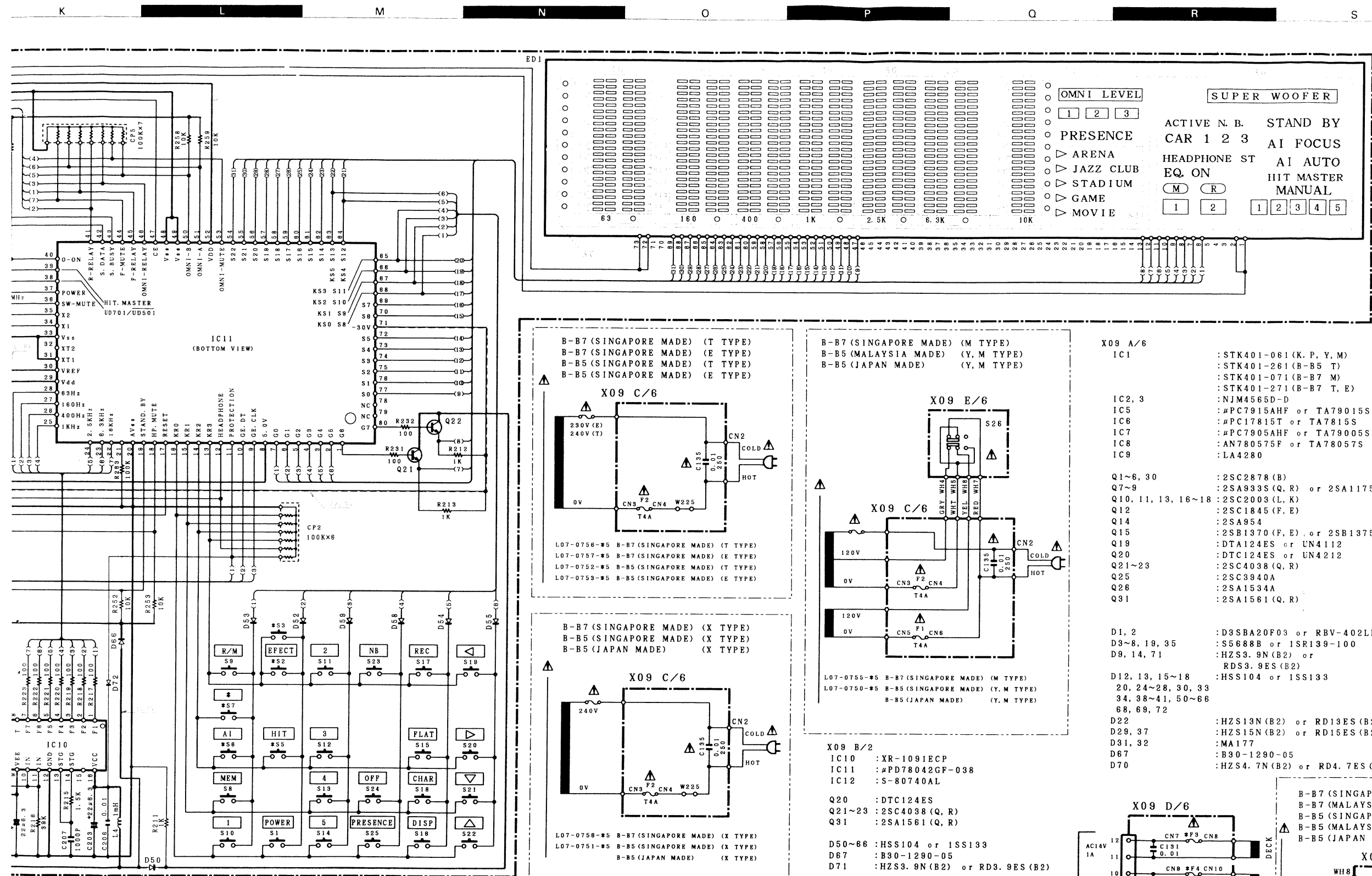
# PC BOARD (Component side view) AUDIO UNIT (X09-390X-XX)



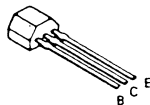
AC 220-240V → AC 110-120V~



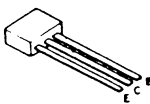




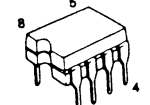
2SA1534A 2SC2003  
2SA954 2SC2878  
2SC1845 2SC3940A



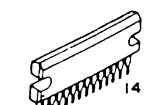
DTA124ES 2SA1048  
DTC124ES 2SA933S  
UN4112



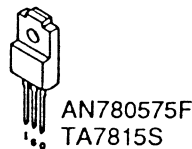
UN4212  
2SA1309A



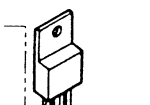
NJM4565D-D



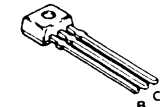
LA4280



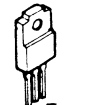
AN780575F  
TA7815S



TA79005S  
TA79015S



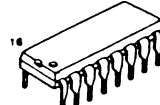
2SA1175



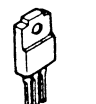
2SB1370



2SB1375



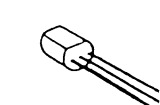
XR-1091EC



UPC7815AHF

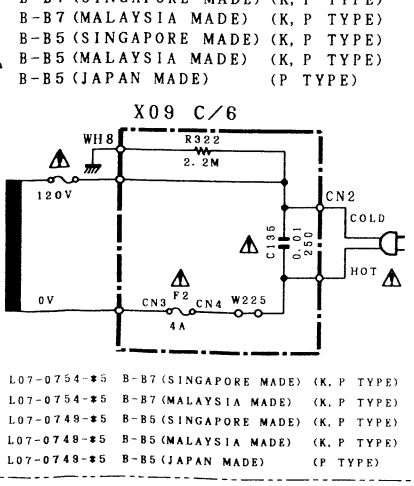
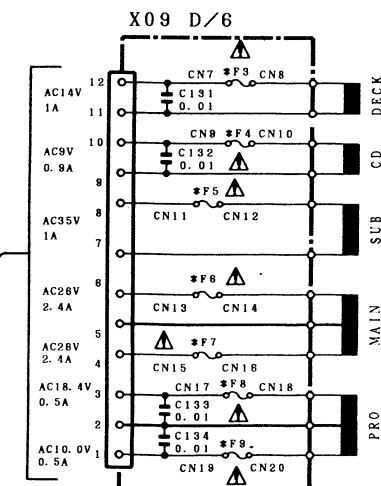


UPC79



S-80740A

3	C51~	C59~70, 73, 97	C71, 72	R53~	R63, 64, 65~78	R95~98				R240		R243			CN11						S2		J3							
4	C56	98, 101~103 125, 153	74, 95 96	R56	135~137, 139 155~157	R128 R129	R122	R171	R173	R242	R241	R245	R244	R351	CN12	K5	K6	J1	J2, 3	J6	S5 S7	S3, 6	WH2	W203	W226	F3	F5	F4 F8 F9	F6 F7	
1	NO	NO	NO	NO	NO	NO	330	470	180	NO	NO	YES	YES	NO	NO	NO	NO	4P	NO	YES	NO	YES	NO	NO	YES	2A	NO	1.6A	4A	
1	YES	YES	NO	YES	YES	NO	120	1	1	NO	YES	YES	NO	120	YES	NO	YES	4P	NO	NO	YES	NO	NO	NO	T2A	T2.5A	T1.6A	T4A		
1	YES	YES	NO	YES	YES	NO	120	1	1	NO	YES	YES	NO	120	YES	NO	YES	4P	NO	NO	YES	NO	NO	NO	T2A	T2.5A	T1.6A	T4A		
1	NO	NO	NO	NO	NO	NO	330	470	180	NO	NO	YES	YES	NO	NO	NO	NO	4P	NO	NO	NO	YES	NO	NO	YES	2A	NO	1.6A	4A	
1	YES	YES	NO	YES	YES	NO	120	1	1	NO	YES	YES	NO	120	YES	NO	YES	4P	NO	NO	YES	NO	NO	NO	T2A	T2.5A	T1.6A	T4A		
1	YES	YES	NO	YES	YES	NO	120	1	1	NO	YES	YES	NO	120	YES	NO	YES	4P	NO	NO	YES	NO	NO	NO	T2A	T2.5A	T1.6A	T4A		
1	NO	NO	NO	NO	NO	NO	330	470	180	NO	NO	YES	YES	NO	NO	NO	NO	4P	NO	YES	NO	YES	NO	NO	YES	T2A	NO	T1.6A	T4A	
1	NO	NO	NO	NO	NO	NO	330	470	180	NO	NO	YES	YES	NO	NO	NO	NO	4P	NO	YES	NO	YES	NO	NO	YES	2A	NO	1.6A	4A	
S	NO	YES	YES	NO	YES	YES	330	150	150	YES	NO	NO	YES	330	YES	YES	YES	8P	YES	NO	NO	YES	NO	NO	NO	2A	2.5A	1.6A	4A	
S	NO	YES	YES	NO	YES	YES	120	27	27	YES	YES	NO	NO	120	YES	YES	YES	8P	YES	NO	YES	NO	YES	YES	NO	T2A	T2.5A	T1.6A	T4A	
S	NO	YES	YES	NO	YES	YES	120	27	27	YES	YES	NO	NO	120	YES	YES	YES	8P	YES	NO	YES	NO	YES	YES	NO	T2A	T2.5A	T1.6A	T4A	
S	NO	YES	YES	NO	YES	YES	330	150	150	YES	NO	NO	YES	120	YES	YES	YES	8P	YES	NO	NO	YES	YES	YES	NO	T2A	T2.5A	T1.6A	T2A	
S	NO	YES	YES	NO	YES	YES	330	150	150	YES	NO	NO	YES	330	YES	YES	YES	8P	YES	NO	NO	YES	YES	YES	NO	2A	2.5A	1.6A	4A	



**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

Y08-4930-10

**B-B5/B**  
**KENWOOD**



## PARTS LIST



## NO. 1

[illegible]

U: JAPAN MADE  
S: SINGAPORE MADE  
W: MALAYSIA MADE  
5-B-B5  
7-B-B7

J: JAPAN MADE  
S: SINGAPORE MADE  
W: MALAYSIA MADE  
5: B-B5  
7: B-B7

## PARTS LIST

★ New Parts:  
Parts without Parts No. are not supplied.  
Les articles non mentionnés dans le Parts No. ne sont pas fournis.  
Teile ohne Parts No. werden nicht geliefert.

NO.4

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕	Re- marks 備考
C181		CE04KW1C102M	ELECTR0 1000UF	J	
C181		CE04KW1C102M	ELECTR0 1000UF	S	
C182, 183		CE92FV1H104J	MF 100UF	J	
C184-187		CE04KW1B221M	ELECTR0 220UF	S	
C184-187		CE04KW1B221M	ELECTR0 220UF	S	
C188		CE04KW1V470M	ELECTR0 47UF	J	
C188		CE04KW1V470M	ELECTR0 47UF	S	
C190		CF92FV1H104J	MF 0.10UF	J	
C191, 192		CE04KW1V221M	ELECTR0 220UF	J	
C193-196		CF92FV1H104J	MF 0.10UF	J	
C201, 202		C91-0757-05	CERAMIC 1000PF	K	
C203		C90-3503-05	ALUMINIUM ELECTROLYTIC C.		
C204		C91-0769-05	CERAMIC 0.01UF	K	
C205		C90-3503-05	ALUMINIUM ELECTROLYTIC C.		
C206		C91-0769-05	CERAMIC 0.01UF	K	
C207		CF92FV1H102J	MF 1000PF	J	
C208		C90-3505-05	ALUMINIUM ELECTROLYTIC C.		
C209		C91-0769-05	CERAMIC 0.01UF	K	
C210		C90-3503-05	ALUMINIUM ELECTROLYTIC C.		
C211		C91-0769-05	CERAMIC 0.01UF	K	
C212		C90-1827-05	BACKUP 0.047F	5.5W	
C213, 214		C91-0769-05	CERAMIC 0.01UF	K	
C216, 217		C91-0769-05	CERAMIC 0.01UF	K	
C218		C90-3214-05	ELECTR0 100UF	6.3W	
C252		C91-0769-05	CERAMIC 0.01UF	K	
C355		C90-3505-05	ALUMINIUM ELECTROLYTIC C.		
C300, 301		CE04KW1V100M	ELECTR0 10UF	35W	
C303, 304		CE04KW1V100M	ELECTR0 10UF	35W	
C310, 311		CK45F81H22K	CERAMIC 2200PF	K	
C350		C91-0749-05	CERAMIC 220PF	K	
C350		CE04KW1A101M	ELECTR0 100UF	10W	
C351, 352		CE04KW1A101M	ELECTR0 100UF	10W	
C354		CF92FV1H104J	MF 0.10UF	J	
J1		E70-0032-05	LOCK TERMINAL BOARD SPEAKERS		
J2		E63-0017-05	PHONE JACK SURROUND S/S WOOFER	KPTE	
J2		E63-0096-05	PHONE JACK SURROUND S/S WOOFER	YMX	
J2		E63-0096-05	PHONE JACK SURROUND S/S WOOFER	YMX	
J3		E13-0223-05	PHONE JACK REAR INPUT		
J4		E11-0234-05	PHONE JACK HEAD PHONES		
J5		E58-0006-05	RECTANGULAR RECEPTACLE BLACK		
650	1C	F20-1371-05	INSULATING SHEET	YMX	
651	1C	F20-1384-05	INSULATING SHEET		
651	1C	F20-1384-05	INSULATING SHEET		
F1, 2	A, F1, 2	F05-4025-05	FUSE (SEMØ) (250V T4A)	M	
F2	A, F2	F05-4025-05	FUSE (SEMØ) (250V T2A)	YMX	
F2	A, F2	F05-4028-05	FUSE (UL) (125V 4A)	KP	
F3	A, F3	F04-4025-05	FUSE (SEMØ) (250V T2A)	XTE	
F3	A, F3	F04-4025-05	FUSE (UL) (250V 2A)	KP	
F3	A, F3	F04-4025-05	FUSE (UL) (250V 2A)	YMX	
F3	A, F3	F06-2021-05	FUSE (SEMØ) (250V T2A)	MXTE	
F4	A, F4	F05-1623-05	FUSE (SEMØ) (250V T1.6A)	YMXTE	
F4	A, F4	F05-1623-05	FUSE (SEMØ) (250V T1.6A)	KP	
F4	A, F4	F05-1626-05	FUSE (UL) (250V 1.6A)		

J: JAPAN MADE  
S: SINGAPORE MADE  
W: MALAYSIA MADE  
5: B-B5  
7: B-B7

K: USA  
P: Canada  
T: England  
E: Europe  
X: Australia  
M: Other Areas

L: Scandinavia  
Y: PK (Far East, Hawaii)  
Y: AFES (Europe)

indicates safety critical components

★ New Parts:  
Parts without Parts No. are not supplied.  
Les articles non mentionnés dans le Parts No. ne sont pas fournis.  
Teile ohne Parts No. werden nicht geliefert.

NO.3

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕	Re- marks 備考
C51, 52		CE04LW1V100M	ELECTR0 10UF	YMX	
C53, 54		CC45FSL1H101J	CERAMIC 100PF	S	
C55, 56		CE04KW1V100M	ELECTR0 10UF	YMX	
C55, 56		CE04KW1V100M	ELECTR0 10UF	S	
C59, 60		CE04KW1H470M	ELECTR0 4.7UF	YMX	
C59, 60		CE04KW1H470M	ELECTR0 4.7UF	S	
C61, 62		CK45F81H471K	CERAMIC 470PF	K	
C63, 64		CE04KW1A221M	ELECTR0 220UF	10W	
C63, 64		CE04LW1A221M	ELECTR0 220UF	10W	
C65, 66		CC45FSL1H101J	CERAMIC 100PF	J	
C65, 66		CC45FSL1H101J	CERAMIC 100PF	S	
C67, 68		CF92FV1H104J	MF 0.10UF	J	
C67, 68		CF92FV1H104J	MF 0.10UF	S	
C69, 70		CE04KW1V471M	ELECTR0 470UF	35W	
C69, 70		CE04LW1V471M	ELECTR0 470UF	35W	
C71, 72		CK45F81H472Z	CERAMIC 4700PF	Z	
C73		C91-0757-05	CERAMIC 1000PF	K	
C73		C91-0757-05	CERAMIC 1000PF	K	
C74, 75		C91-0769-05	CERAMIC 0.01UF	K	
C95, 96		CC45FSL1H221J	CERAMIC 220PF	J	
C97, 98		CK45F81H472Z	CERAMIC 4700PF	Z	
C97, 98		CK45F81H472Z	CERAMIC 4700PF	Z	
C101, 102		CF92FV1H104J	MF 0.10UF	J	
C101, 102		CF92FV1H104J	MF 0.10UF	S	
C103		CE04KW1H102M	ELECTR0 1000UF	50W	
C103		CE04KW1H102M	ELECTR0 1000UF	50W	
C104-107		CF92FV1H104J	MF 0.10UF	J	
C108, 109		C90-1966-05	ELECTR0 42W	KPTE	
C108, 109		C90-3518-05	ELECTR0 42W		
C108, 109		C90-3518-05	ELECTR0 42W	YMX	
C110		CE04KW1E470M	ELECTR0 47UF	25W	
C110		CE04KW1E470M	ELECTR0 47UF	25W	
C112		CF92FV1H104J	MF 0.10UF	J	
C114		CF92FV1H104J	MF 0.10UF	J	
C116		CE04KW1A101M	ELECTR0 100UF	10W	
C117		CE04LW1A101M	ELECTR0 100UF	10W	
C124		CE04HW1E100M	NP-ELEC 25W		
C125		CE04HW1E200M	NP-ELEC 22UF	25W	
C125		CE04HW1E200M	NP-ELEC 22UF	25W	
C126		CE04HW1H2R2M	NP-ELEC 2.2UF	50W	
C128		CK45F81H102K	CERAMIC 1000PF	K	
C129		CE04HW1A101M	NP-ELEC 100UF	10W	
C131-134		CK45F81H103Z	CERAMIC 0.01UF	Z	
C135		C91-1439-05	FTLM 250VAC		
C151		CE04HW1H2R2M	NP-ELEC 2.2UF	50W	
C152		CF92FV1H104J	MF 0.10UF	J	
C153		CE04LW1H101M	ELECTR0 100UF	50W	
C153		C90-3523-05	ELECTR0 100UF	50W	
C154, 155		CF92FV1H103Z	MF 0.01UF	Z	
C150		CF92FV1H104J	MF 0.10UF	J	

J: JAPAN MADE  
S: SINGAPORE MADE  
W: MALAYSIA MADE  
5: B-B5  
7: B-B7

K: USA  
P: Canada  
T: England  
E: Europe  
X: Australia  
M: Other Areas

L: Scandinavia  
Y: PK (Far East, Hawaii)  
Y: AFES (Europe)

indicates safety critical components

# PARTS LIST

NO.6

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕	Re- marks 備考
K2 -4		S51-2094-05	MAGNETIC RELAY	KPTE	5
K5 -7		S76-0005-05	MAGNETIC RELAY	YMX	5
K6 ,7		S76-0005-05	MAGNETIC RELAY	KPTE	5
K7		S40-1064-05	PUSH SWITCH	YMX	5
S1		S40-1064-05	POWER		
S1 ,2		S40-1064-05	PUSH SWITCH	YMX	7
S3 ,2		S40-1064-05	PUSH SWITCH	KPTE	5
S5		S40-1064-05	PUSH SWITCH	YMX	7
S5		S40-1064-05	HIT MASTER	YMX	5
S6		S40-1064-05	HIT MASTER	KPTE	7
S7 -25		S40-1064-05	PUSH SWITCH	YMX	5
S7 -25		S40-1064-05	KEY BOARD	YMX	5
S8 -25		S40-1064-05	KEY BOARD	KPTE	7
A, S26		S62-0001-05	SLIDE SWITCH	YMX	5
A, S26		S62-0001-05	VOLTAGE SELECTOR		
D1		D35BA20F03	DIODE	KPTE	5
D1		RBV-402LFA	DIODE	KPTE	5
D1 ,2		D35BA20F03	DIODE	YMX	7
D1 ,2		D35BA20F03	DIODE	YMX	5
D1 ,2		RBV-402LFA	DIODE	YMX	7
D1 ,2		RBV-402LFA	DIODE	YMX	5
D3 -8		SS688B	DIODE		
D9		1SR139-100	ZENER DIODE		
D9		HZS3.9N(B2)	ZENER DIODE		
D12 ,13		HSS104	DIODE	YMX	7
D12 ,13		HSS104	DIODE	YMX	7
D12 ,13		1SS133	DIODE	YMX	5
D14		HZS3.9N(B2)	ZENER DIODE		
D14		RD3.9ES(B2)	ZENER DIODE		
D15 -17		HSS104	DIODE	YMX	5
D15 -17		1SS133	DIODE	YMX	5
D15 -18		HSS104	DIODE	YMX	7
D15 -18		1SS133	DIODE	YMX	5
D15 ,16		HSS104	DIODE	KPTE	5
D15 ,16		1SS133	DIODE	KPTE	5
D19		SS688B	DIODE		
D19		1SR139-100	DIODE		
D20		HSS104	DIODE		
D20		1SS133	DIODE		
D21		RB721Q	DIODE		
D22		HZS13N(B2)	ZENER DIODE		
D22		RD13ES(B2)	ZENER DIODE		
D24 -28		HSS104	DIODE	YMX	7
D24 -28		1SS133	DIODE	YMX	5
D24 -28		1SS133	DIODE	YMX	7
D24 -28		1SS133	DIODE	KPTE	5
D24 ,25		HSS104	DIODE	KPTE	5
D24 ,25		1SS133	DIODE	KPTE	5
D27 ,28		HSS104	DIODE	KPTE	5
D27 ,28		1SS133	DIODE	KPTE	5
D29		HZS15N(B2)	ZENER DIODE		

J:JAPAN MADE  
S:SINGAPORE MADE  
W:MALAYSIA MADE  
5:B-B5  
7:B-B7

NO.5

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕	Re- marks 備考
A, F5		F05-2525-05	FUSE (SEHK0)	YMX	7
A, F5		F05-2525-05	(250V T2.5A)	YMX	5
A, F5		F05-2525-05	FUSE (SEHK0)	KP	7
A, F6 ,7		F05-2525-05	(250V T2.5A)	YMX	7
A, F6 ,7		F05-4028-05	FUSE (UL)	KP	7
A, F6 ,7		F05-4028-05	(250V T4A)		
A, F6 ,7		F05-4028-05	FUSE (SEHK0)	YMX	7
A, F6 ,7		F05-4028-05	(250V T2A)	YMX	5
A, F8 ,9		F05-1623-05	FUSE (SEHK0)	YMX	7
A, F8 ,9		F05-1623-05	(250V T1.6A)	YMX	5
A, F8 ,9		F05-1623-05	FUSE (UL)	KP	7
A, F8 ,9		F05-1623-05	(250V 1.6A)		
CN3 -20		J13-0075-05	FUSE CLIP	M	7
CN3 -20		J13-0075-05	FUSE CLIP	YMX	5
CN3 ,4		J13-0075-05	FUSE CLIP	KPTE	5
CN3 ,4		J13-0075-05	FUSE CLIP	KPTE	5
CN7 -10		J13-0075-05	FUSE CLIP	KPTE	7
CN7 -20		J13-0075-05	FUSE CLIP	X	5
CN7 -20		J13-0075-05	FUSE CLIP	KPTE	5
CN13-20		J13-0075-05	FUSE CLIP	KPTE	5
L1 ,2		L39-0085-05	PHASE COMPENSATION COIL		
L4 ,5		L40-1031-14	SMALL FLYBACK INDUCTOR(1.0MH, K)		
T1		L07-0822-05	POWER TRANSFORMER		
X1		L76-0287-05	RESONATOR (4.194MHZ)		
A	IC	N09-0333-05	TAPPING SCREW (3X12)	YMX	7
A	IC	N09-0333-05	TAPPING SCREW (3X12)		
A	IC	N09-1236-05	TAPPING SCREW (3X16)		
B	2C	N09-3008-45	BINDING HEAD TAPLITE SCREW		
CP1		R90-0826-05	MULTI-COMP		
CP2		R90-0826-05	MULTI-COMP	J 5W	
CP5		R90-0803-05	MULTI-COMP	J 1/4W	
R19 ,20		RS14KB30100J	FL-PROOF RS 100	J 2W	
R25 ,26		RD14NB2E101J	RD 100	J 1/4W	
R43 ,44		RS14KB30221J	FL-PROOF RS 220	J 2W	
R75 ,76		RS14KB30221J	FL-PROOF RS 220	J 2W	
R75 ,76		RS14KB30221J	FL-PROOF RS 220	J 2W	
R77 ,78		RS14KB30282J	FL-PROOF RS 2.2	J 2W	
R77 ,78		RS14KB30282J	FL-PROOF RS 2.2	J 2W	
R122		RS14KB30331J	FL-PROOF RS 330	J 2W	
R171		RS14KB30180J	FL-PROOF RS 1.0	J 2W	
R171		RS14KB30151J	FL-PROOF RS 150	J 2W	
R171		RS14KB30270J	FL-PROOF RS 27	J 2W	
R171		RS14KB30471J	FL-PROOF RS 470	J 2W	
R173		RS14KB30180J	FL-PROOF RS 1.0	J 2W	
R173		RS14KB30151J	FL-PROOF RS 150	J 2W	
R173		RS14KB30181J	FL-PROOF RS 180	J 2W	
R173		RS14KB30270J	FL-PROOF RS 270	J 2W	
R181		RD14NB2E221J	RD 220	J 1/4W	
R183 ,184		RS14KB30100J	FL-PROOF RS 10	J 2W	
R185		RD14NB2E221J	RD 220	J 1/4W	
R305		RS14KB304562J	FL-PROOF RS 5.6K	J 1W	
R322		R22-0173-05	RC 2.2M	H 1/2W	
R351		RS14KB30121J	FL-PROOF RS 120	J 2W	
R351		RS14KB30121J	FL-PROOF RS 120	J 2W	
K1 -4		SS1-2094-05	MAGNETIC RELAY	YMX	7
K1 -4		SS1-2094-05	MAGNETIC RELAY	YMX	5

J:JAPAN MADE  
S:SINGAPORE MADE  
W:MALAYSIA MADE  
5:B-B5  
7:B-B7

✖ New Parts  
Parts without Parts No. are not supplied.  
Les articles non mentionnés dans le Parts No. ne sont pas fournis.  
Teile ohne Parts No. werden nicht geliefert.

✖ New Parts  
Parts without Parts No. are not supplied.  
Les articles non mentionnés dans le Parts No. ne sont pas fournis.  
Teile ohne Parts No. werden nicht geliefert.

indicates safety critical components

indicates safety critical components

## PARTS LIST

NO.8

✳ New Parts  
Parts without Parts No. are not supplied.  
Les articles non mentionnés dans le Parts No. ne sont pas fournis.  
Teil ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
Q7		2SA933S(Q,R)	TRANSISTOR	KPTE	5
Q7 -9		2SA1048(Y,GR)	TRANSISTOR	YMX	5
Q7 -9		2SA1175(F,E)	TRANSISTOR	YMX	7
Q7 -9		2SA1175(F,E)	TRANSISTOR	YMX	SS
Q7 -9		2SA1309A(Q,R)	TRANSISTOR	YMX	SS
Q7 -9		2SA933S(Q,R)	TRANSISTOR	YMX	7
Q7 -9		2SA933S(Q,R)	TRANSISTOR	YMX	SS
Q9		2SA1175(F,E)	TRANSISTOR	KPTE	5
Q9		2SA933S(Q,R)	TRANSISTOR	KPTE	5
Q10, 11		2SC2003(L,K)	TRANSISTOR		
Q12		2SC1845(F,E)	TRANSISTOR		
Q13		2SC2003(L,K)	TRANSISTOR		
Q14		2SA954(L,K)	TRANSISTOR		
Q15		2SB1370(F,E)	TRANSISTOR		
Q15		2SB1375	TRANSISTOR		
Q16 -18		2SC2003(L,K)	TRANSISTOR	YMX	7
Q17 -18		2SC2003(L,K)	TRANSISTOR	KPTE	5
Q18		2SC2003(L,K)	TRANSISTOR	KPTE	5
Q19		DTA124ES	DIGITAL TRANSISTOR		
Q19		UN4112	DIGITAL TRANSISTOR		
Q20		DTA124ES	DIGITAL TRANSISTOR		
Q20		UN4212	DIGITAL TRANSISTOR		
Q21 -23		2SC4038(Q,R)	TRANSISTOR		
Q25		2SC3940A	TRANSISTOR		
Q26		2SA1534A	TRANSISTOR		
Q30		2SC2878(B)	TRANSISTOR		
Q31		2SA1561(Q,R)	TRANSISTOR		

J-JAPAN MADE  
S-SINGAPORE MADE  
W-MALAYSIA MADE  
5-B-B5  
7-B-B7

KUSA  
P-Canada  
E-Europe  
T-England  
M-Other Areas

L-Scandinavia  
Y-PX(Far East, Hawaii)  
Y-AFES(Europe)

△ indicates safety critical components

NO.7

✳ New Parts  
Parts without Parts No. are not supplied.  
Les articles non mentionnés dans le Parts No. ne sont pas fournis.  
Teil ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
D29		RD15ES(B2)	ZENER DIODE		7
D30		HSS104	DIODE		
D31		ISS133	DIODE		
D31, 32		RA177	DIODE		
D33, 34		HSS104	DIODE		
D33, 34		ISS133	DIODE		
D34		HSS104	DIODE		
D34		ISS133	DIODE		
D35		SS688B	DIODE		
D35		YSR139-100	DIODE		
D36		HSS104	DIODE		
D36		ISS133	DIODE		
D37		HZS15N(B2)	ZENER DIODE		
D37		RD15ES(B2)	ZENER DIODE		
D38 -45		HSS104	DIODE		
D38 -45		ISS133	DIODE		
D50 -66		HSS104	DIODE		
D50 -66		ISS133	DIODE		
D68, 69		HSS104	DIODE		
D68, 69		ISS133	DIODE		
D70		HZS4, 7N(B2)	ZENER DIODE		
D70		RD4, 7ES(B2)	ZENER DIODE		
D71		HZS3, 9N(B2)	ZENER DIODE		
D71		RD3, 9ES(B2)	ZENER DIODE		
D72		HSS104	DIODE		
D72		ISS133	DIODE		
D72 -74		HSS104	DIODE		
D72 -74		ISS133	DIODE		
ED1		B1175GK	INDICATOR TUBE	KPYMX	5
IC1		STK401-061	IC(CAF POWER AMP/35W)		
IC1		STK401-071	IC(CAF POWER AMP/40WX2)	KPMX	7
IC1		STK401-261	IC(CAF POWER AMP/35W)	TE	5
IC1		STK401-271	IC(CAF POWER AMP/40WX2)	TE	5
IC2, 3		NJM45650-D	IC(OP AMP X2)	YMX	7
IC2, 3		NJM45650-D	IC(OP AMP X2)		
IC3		NJM45650-D	IC(OP AMP X2)	KPTE	5
IC5		TA7901SS	IC(VOLTAGE REGULATOR/ -15V)		
IC5		UPC7915HF	IC(VOLTAGE REGULATOR/ -15V)		
IC6		TA7815S	IC(VOLTAGE REGULATOR/ +15V)		
IC6		UPC7815AHF	IC(VOLTAGE REGULATOR/ +15V)		
IC7		TA7900SS	IC(VOLTAGE REGULATOR/ -5V)		
IC7		UPC7905HF	IC(VOLTAGE REGULATOR/ -5V)		
IC8		AN780575F	IC(VOLTAGE REGULATOR/+5.75V)		
IC8		TA780575	IC(VOLTAGE REGULATOR/+5.75V)		
IC9		LA4280	IC(CAF POWER AMP/10WX2)		
IC9		LA4280	IC(CAF POWER AMP/10WX2)		
IC10		XR-1091ECP	IC(GE FILTER)	YMX	5
IC11		UPD780426F-038	IC(MICROPROCESSOR)		
IC12		MN1381-R(TA)	IC(VOLTAGE DETECT)		
IC12		S-80740AL	IC(VOLTAGE DETECTOR)		
Q1 -6		2SC2878(B)	TRANSISTOR	YMX	7
Q1 -6		2SC2878(B)	TRANSISTOR	KPTE	5
Q1, 2		2SC2878(B)	TRANSISTOR	KPTE	5
Q5, 6		2SC2878(B)	TRANSISTOR	KPTE	5
Q7		2SA1175(F,E)	TRANSISTOR	KPTE	5

J-JAPAN MADE  
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M-Other Areas

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Y-PX(Far East, Hawaii)  
Y-AFES(Europe)

△ indicates safety critical components

(For U.K. and Europe)

(B-B5)

Power amplifier section  
Rated power output

(IEC / NF)	30 W + 30 W
(63 Hz ~ 12.5 kHz, 0.7 % THD, 6 Ω)	
(DIN)	32 W + 32 W (1 kHz, 6 Ω)
Total harmonic distortion	0.7 % (40 Hz ~ 20 kHz, 30 W, 6 Ω)
Frequency response	20 Hz ~ 70 kHz, + 0 dB, - 1.0 dB
Signal to noise ratio	105 dB (IHF'66)
Input sensitivity / Impedance	200 mV / 47 kΩ
Output level / Impedance	2.0 V / 600 Ω
SUPER WOOFER PRE OUT	

Graphic equalizer section

Individual channel	63 Hz, 160 Hz, 400 Hz, 1 kHz, 2.5 kHz, 6.3 kHz, 16 kHz
Equalizer characteristic variable range	± 10 dB

[General]

Power consumption	110 W
Dimensions	W: 270 mm (10-5 / 8") H: 120 mm (4-3 / 4") D: 319 mm (12-9 / 16")
Weight (net)	5.8 kg (12.8 lb)

(B-B7)

Power amplifier section  
Rated power output

(DIN)	32 W + 32 W (1 kHz, 6 Ω)
Total harmonic distortion	0.7 % (40 Hz ~ 20 kHz, 32 W, 6 Ω)
Frequency response	25 Hz ~ 70 kHz, + 0 dB, - 1.0 dB
Signal to noise ratio	105 dB (IHF'66)
Input sensitivity / Impedance	200 mV / 47 kΩ

Graphic equalizer section

Individual channel	63 Hz, 160 Hz, 400 Hz, 1 kHz, 2.5 kHz, 6.3 kHz, 16 kHz
Equalizer characteristic variable range	± 10 dB

[General]

Power consumption	120 W
Dimensions	W: 270 mm (10-5 / 8") H: 120 mm (4-3 / 4") D: 319 mm (12-9 / 16")
Weight (net)	5.8 kg (12.8 lb)



# B-B5/B7

## SPECIFICATIONS

(For other countries)

(B-B5)

Power amplifier section  
Rated power output

FRONT ..... 30 W + 30 W (EIAJ, 6  $\Omega$ )  
REAR ..... 8 W + 8 W (EIAJ, 8  $\Omega$ )

Total harmonic distortion

..... 0.09 % (1kHz, 1/2 Rated power, 6  $\Omega$ )

Frequency response

..... 20 Hz ~ 70 kHz, + 0 dB, - 1.0 dB

Signal to noise ratio

..... 105 dB (IHF'66)

Input sensitivity / Impedance

..... 200 mV / 47 k $\Omega$

Output level / Impedance

SUPER WOOFER PRE OUT ..... 2.0 V / 600  $\Omega$

Graphic equalizer section

Individual channel ..... 63 Hz, 160 Hz, 400 Hz,  
1 kHz, 2.5 kHz, 6.3 kHz, 16 kHz

Equalizer characteristic variable range

.....  $\pm 10$  dB

[General]

Power consumption ..... 110 W

Dimensions

W: 270 mm (10-5 / 8")  
H: 120 mm (4-3 / 4")  
D: 319 mm (12-9 / 16")

Weight (net) ..... 5.8 kg (12.8 lb)

(B-B7)

Power amplifier section  
Rated power output

FRONT ..... 35 W + 35 W (EIAJ, 6  $\Omega$ )  
REAR ..... 12 W + 12 W (EIAJ, 8  $\Omega$ )

Total harmonic distortion

..... 0.09 % (1kHz, 1/2 Rated power, 8  $\Omega$ )

Frequency response

..... 20 Hz ~ 70 kHz, + 0 dB, - 1.0 dB

Signal to noise ratio

..... 105 dB (IHF'66)

Input sensitivity / Impedance

..... 200 mV / 47 k $\Omega$

Graphic equalizer section

Individual channel ..... 63 Hz, 160 Hz, 400 Hz,  
1 kHz, 2.5 kHz, 6.3 kHz, 16 kHz

Equalizer characteristic variable range

.....  $\pm 10$  dB

[General]

Power consumption ..... 120 W

Dimensions

W: 270 mm (10-5 / 8")  
H: 120 mm (4-3 / 4")  
D: 319 mm (12-9 / 16")

Weight (net) ..... 5.8 kg (12.8 lb)

# B-B5/B7

(For U.S.A. and Canada)

(B-B5)

Power amplifier section  
Rated power output

28 watts per channel minimum RMS, both channels driven, at 6  $\Omega$  from 40 Hz to 20 kHz with no more than 0.4 % total harmonic distortion.

Total harmonic distortion

..... 0.4 % (40 Hz ~ 20 kHz, 28 W, 6  $\Omega$ )

Frequency response

..... 20 Hz ~ 70 kHz, + 0 dB, - 1.0 dB

Signal to noise ratio

..... 105 dB (IHF'66)

Input sensitivity / Impedance

..... 200 mV / 47 k $\Omega$

Output level / Impedance

SUPER WOOFER PRE OUT ..... 2.0 V / 600  $\Omega$

Graphic equalizer section

Individual channel ..... 63 Hz, 160 Hz, 400 Hz,  
1 kHz, 2.5 kHz, 6.3 kHz, 16 kHz

Equalizer characteristic variable range

.....  $\pm 10$  dB

[General]

Power consumption ..... 110 W

Dimensions

W: 270 mm (10-5 / 8")  
H: 120 mm (4-3 / 4")  
D: 319 mm (12-9 / 16")

Weight (net) ..... 5.8 kg (12.8 lb)

(B-B7)

Power amplifier section  
Rated power output

30 watts per channel minimum RMS, both channels driven, at 6  $\Omega$  from 40 Hz to 20 kHz with no more than 0.4 % total harmonic distortion.

REAR

10 watts per channel minimum RMS, both channels driven, at 8  $\Omega$  from 40 Hz to 20 kHz with no more than 0.4 % total harmonic distortion.

Total harmonic distortion

..... 0.2% (40 Hz ~ 20kHz, 30W, 6  $\Omega$ )

Frequency response

..... 25 Hz ~ 80 kHz, + 0 dB, - 1.0 dB

Signal to noise ratio

..... 105 dB (IHF'66)

Input sensitivity / Impedance

..... 200 mV / 47 k $\Omega$

Graphic equalizer section

Individual channel ..... 63 Hz, 160 Hz, 400 Hz,  
1 kHz, 2.5 kHz, 6.3 kHz, 16 kHz

Equalizer characteristic variable range

.....  $\pm 10$  dB

[General]

Power consumption ..... 120 W

Dimensions

W: 270 mm (10-5 / 8")  
H: 120 mm (4-3 / 4")  
D: 319 mm (12-9 / 16")

Weight (net) ..... 5.8 kg (12.8 lb)

## KENWOOD CORPORATION

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Note:  
Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.